SEQUENCE LISTING

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<120> METHOD FOR INHIBITION OF PHOSPHOLAMBAN ACTIVITY FOR THE TREATMENT OF CARDIAC DISEASE

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<151> 1998-11-02

<150> PCT/US99/25692
<151> 1999-11-02

<160> 19

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<210> 1
<211> 52
<212> PRT
<213> Homo sapiens

<400> 1

Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1 5 10 15

Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
20 25 30

Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
35 40 45

Val Met Leu Leu
50

<210> 2
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<212> PRT

<213> Homo sapiens

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Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1               5                   10                  15


Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30


Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45


Ala Met Leu Leu
    50
```

<210> 3
<211> 52
<212> PRT
<213> Homo sapiens

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Met Ala Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1               5                   10                  15


Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30


Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45


Val Met Leu Leu
    50
```

<210> 4
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<212> PRT
<213> Homo sapiens

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Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Glu Ala Ser
1               5                   10                  15
```

```
Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30

Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45

Val Met Leu Leu
    50
```

<210> 5
<211> 52
<212> PRT
<213> Homo sapiens

<400> 5

```
Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Asn
1               5                   10                  15

Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30

Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45

Val Met Leu Leu
    50
```

<210> 6
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<212> PRT
<213> Homo sapiens

<400> 6

```
Met Glu Glu Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Glu Ala Ser
1               5                   10                  15

Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30

Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45
```

Val Met Leu Leu
50

<210> 7
<211> 16
<212> PRT
<213> Drosophila melanogaster

<400> 7

Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys
1 5 10 15

<210> 8
<211> 16
<212> PRT
<213> Homo sapiens

<400> 8

Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1 5 10 15

<210> 9
<211> 269
<212> PRT
<213> Homo sapiens

<400> 9

Met His His His His His His Val Ala Gln Ala Ala Leu Thr His Ser
1 5 10 15

Ser Ser Val Ser Ala Asn Pro Gly Glu Thr Val Lys Ile Thr Cys Ser
20 25 30

Gly Gly Gly Asn Tyr Ala Gly Ser Tyr Tyr Tyr Gly Trp Phe Gln Gln
35 40 45

Lys Ser Pro Gly Ser Ala Pro Val Thr Val Ile Tyr Ser Asn Asp Gln
50 55 60

Arg Pro Ser Asn Ile Pro Ser Arg Phe Ser Gly Ser Thr Ser Gly Ser
65 70 75 80

Thr Ser Thr Leu Thr Ile Thr Gly Val Arg Ala Glu Asp Glu Ala Val

```
                85                  90                  95

Tyr Phe Cys Gly Ser Asn Ser Gly Thr Gly Tyr Val Gly Ile Phe Gly
            100                 105                 110

Ala Gly Thr Thr Leu Thr Val Leu Gly Gln Ser Ser Arg Ser Ser Thr
        115                 120                 125

Val Thr Leu Asp Glu Ser Gly Gly Gly Leu Gln Thr Pro Gly Gly Ala
    130                 135                 140

Leu Ser Leu Val Cys Arg Ala Ser Gly Phe Thr Phe Ser Arg Phe His
145                 150                 155                 160

Met Met Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala
                165                 170                 175

Gly Ile Asp Asp Gly Gly Ser Phe Thr Leu Tyr Gly Ala Ala Val Lys
            180                 185                 190

Gly Arg Ala Thr Ile Leu Arg Asp Asn Gly Gln Ser Thr Val Arg Leu
        195                 200                 205

Gln Leu Asp Asn Leu Arg Pro Glu Asp Thr Ala Thr Tyr Phe Cys Val
    210                 215                 220

Lys Thr Lys Cys Gly Gly Asn Gly Trp Cys Gly Ala Asp Arg Ile Asp
225                 230                 235                 240

Ala Trp Gly His Gly Thr Glu Val Ile Val Ser Ser Thr Ser Gly Gln
                245                 250                 255

Ala Gly Gln Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ser
            260                 265
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<210> 10
<211> 36
<212> PRT
<213> Homo sapiens

<400> 10

```
Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1               5                   10                  15

Thr Ile Glu Met Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met
            20                  25                  30

Lys Trp Lys Lys
        35
```

<210> 11
<211> 35
<212> PRT
<213> Homo sapiens

<400> 11

```
Gly Gly Gly Gly Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Met
1               5                   10                  15

Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser Thr
            20                  25                  30

Ile Glu Met
        35
```

<210> 12
<211> 36
<212> PRT
<213> Homo sapiens

<400> 12

```
Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Glu
1               5                   10                  15

Thr Ile Glu Met Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met
            20                  25                  30

Lys Trp Lys Lys
        35
```

<210> 13
<211> 35
<212> PRT
<213> Homo sapiens

<400> 13

Gly Gly Gly Gly Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Met
1 5 10 15

Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Glu Thr
20 25 30

Ile Glu Met
35

<210> 14
<211> 16
<212> PRT
<213> Drosophila melanogaster

<400> 14

Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys
1 5 10 15

<210> 15
<211> 11
<212> PRT
<213> Human immunodeficiency virus

<400> 15

Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg
1 5 10

<210> 16
<211> 61
<212> PRT
<213> Escherichia coli

<400> 16

Met Arg Gly Ser His His His His His His Gly Met Ala Ser Met Thr
1 5 10 15

Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp
20 25 30

Pro Ser Ser Arg Ser Ala Ala Gly Thr Met Glu Phe Arg Gln Ile Lys
35 40 45

```
Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys Ala
    50                  55                  60


<210>  17
<211>  79
<212>  PRT
<213>  Escherichia coli

<400>  17

Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1               5                   10                  15


Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30


Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45


Val Met Leu Leu His His His His His His Lys Gly Glu Phe Arg Gln
    50                  55                  60


Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys Ala
65                  70                  75


<210>  18
<211>  79
<212>  PRT
<213>  Escherichia coli

<400>  18

Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Glu
1               5                   10                  15


Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
            20                  25                  30


Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
        35                  40                  45


Val Met Leu Leu His His His His His His Lys Gly Glu Phe Arg Gln
    50                  55                  60
```

Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys Ala
65 70 75

<210> 19
<211> 79
<212> PRT
<213> Escherichia coli

<400> 19

Met Glu Lys Val Gln Tyr Leu Thr Arg Ser Ala Ile Arg Arg Ala Ser
1 5 10 15

Thr Ile Glu Met Pro Gln Gln Ala Arg Gln Lys Leu Gln Asn Leu Phe
20 25 30

Ile Asn Phe Cys Leu Ile Leu Ile Cys Leu Leu Leu Ile Cys Ile Ile
35 40 45

Ala Met Leu Leu His His His His His His Lys Gly Glu Phe Arg Gln
50 55 60

Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys Ala
65 70 75